REMARKS

Claim 1 is revised to define patentable subject matter over the art of record, including elements formerly in Claim 13, and Claim 13 is cancelled without prejudice. Claim 22 is currently amended to define patentable subject matter over the art of record. Claims 1-11, 15-17, and 22-24 remain, with no claim previously allowed.

The embodiment of Claim 1 provides a method for developing a speech recognition system, specifically, a method for testing and improving the performance of a speech recognition engine (Page 2, Lines 13-15; Page 3, Lines 3-8; and Page 8, Lines 18-25). That embodiment comprises, in combination with other elements, grouping all words, phrases or utterances of a same grammar type in a grammar sub-tree, extracting those words, phrases or utterances via a vocabulary extractor module and passing the extracted utterances to a text-to-speech conversion module. That conversion module provides an audio formatted pronunciation of each utterance in selected grammar sub-tree. Those audio pronunciations are passed from the text-to-speech conversion module to a speech recognition engine, which creates a *recognized* utterance for each audio pronunciation it receives from the conversion module. The method next analyzes each recognized utterance created by the speech recognition engine from the selected grammar sub-tree to determine how closely created recognized utterance approximates the respective audio pronunciation from which that created utterance is derived.

In response to the testing method recited in Claim 1, the developer of a speech recognition engine may change certain parameters of that engine and rerun the process for any selected utterances (Page 13, Lines 7-9). The method embodied in Claim 1 thus provides an automated process for testing and approving the performance of a speech recognition engine.

Claims 1-6, 8-11, 13, 15-17, and 22-24 are rejected as being unpatentable over *Kennewick* (2004/0044516) in view of *Crepy* (6,622,121) and in further view of *Knott* (2003/0191648). Considering that rejection as applied in particular to Claim 13, the elements of which are now included in amended Claim 1, the applicant respectfully traverses the rejection.

Kennewick discloses a method for responding to speech input from a human user and includes a speech recognition engine for that purpose. The rejection (Page 2,

Paragraph 3) asserts that *Kennewick's* Paragraphs 0016, 0108, and 0144 show "similar grammar categorizing" (to the element of categorizing the utterances by grammar type) so as to group all utterances of the same grammar sub-tree, as required by Claim 1. However, Paragraph 0016 of *Kennewick* merely says that a user's utterance may be a command or query, or both. Paragraph 0108 says that so-called "content packages" include questions or commands and may include contexts used for creating one or more queries. The command or question includes a grammar for managing and evaluating a context stack. Paragraph 0144 discusses a voice query language supported by the *Kennewick* system and including a grammar to specify a key word used to determine context and a set of criteria or parameters. However, although those cited paragraphs of *Kennewick* do mention providing a language grammar, neither in those paragraphs nor elsewhere does *Kennewick* disclose categorizing the words, phrases, or utterances by grammar type, whereby all such utterances of a same grammar type are grouped together in a grammar sub-tree.

Kennewick also lacks <u>extracting the one or more utterances in a selected grammar sub-tree via vocabulary extractor module</u>, an element formerly in Claim 13 and now included in the combination of amended Claim 1. According to the rejection (Page 8, first three lines) *Kennewick* discloses extracting one or more utterances via a dictionary unit. However, the section of *Kennewick* cited in support merely says that *Kennewick's* speech recognition engine recognizes words and phrases using information in dictionary and phrase tables. "Recognition" may apply to most if not all speech recognition engines, but the cited section does not disclose "extracting the one or more words, phrases or utterances in a selected grammar sub-tree via a vocabulary extractor module", an element of the method embodied in amended Claim 1.

Crepy merely discusses the step of reading a digital audio file using speech recognition to generate a decoded text representative of a "reference text" (from which the digital audio file was generated, using a text-to-speech device). *Crepy* does not, however, mention categorizing utterances by grammar type into grammar sub-trees, or extracting utterances in a selected grammar tree via a vocabulary extractor module, or passing the audio pronunciation of each utterance from the selected grammar sub-tree to a speech recognition engine for further analysis as in amended Claim 1.

Knott is described as disclosing the grouping-together of grammar type in a grammar sub-tree. However, the mentioned passage in Paragraph 0021 of *Knott* says only that a computer-generated query "requires a response from a limited glossary of affirmations or refutations that are more easily interpreted". *Knott* thus teaches providing a glossary of likely-to-occur responses to a particular question, instead of identifying one or more utterances for recognition by a speech recognition engine, categorizing those utterances by grammar type for grouping into a grammar sub-tree, extracting the utterances into a selected grammar sub-tree via a vocabulary extractor module, and the following elements recited in amended Claim 1.

Accordingly, the applicant respectfully submits that amended Claim 1 and the claims depending therefrom define a method for testing and improving the performance of a speech recognition engine that would not have been obvious to one of ordinary skill, based on the art cited and applied.

Independent Claim 22 likewise distinguishes over *Kennewick* in view of *Crepy* and *Knott* for the reasons discussed above. Accordingly, Claim 22 and dependent Claims 23-24 are believed patentable over that art.

The foregoing is submitted as a complete response to the office action identified above. The applicant submits that the present application is in condition for allowance and solicits a notice to that effect.

Respectfully submitted,

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